

REMARKS

Claim 1 stands rejected under 35 U.S.C 102(b) as being anticipated by Fowler in US Patent No. 4, 711, 194. The Examiner argues that Fowler discloses all the limitations of the present invention. Applicant respectfully disagrees.

In *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), the Federal Circuit states "anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *Id.* at 313. In *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 700 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984), the Federal Circuit states "anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Id.* at 485. Similarly, in *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 18 USPQ 2d 1001 (Fed. Cir. 1991), the Federal Circuit has stated: "There must be no difference between the claimed invention and the reference disclosure as viewed by a person of ordinary skill in the field of the invention." *Id.* at 1010.

The claim under consideration includes the limitation of "a sensor means in the body for determining its angular position in a plane perpendicular to the longitudinal axis of the streamer." The specification defines this angular position as the "roll angle of the bird." (Spec. at page 5, line 16.) The roll angle is best shown in FIGS. 3, 4 and 5, showing views of the bird 10 as the bird rolls about the longitudinal axis of the streamer. The specification further states that the "roll angle signal is produced by an inclinometer 42 mounted within the bird 10." (Spec. at 5, lines 22-23.)

The Examiner states that Fowler "further discloses the limitation of the sensor means in the body for determining its angular position in a plane perpendicular to the longitudinal axis of the streamer, (see the depth sensor element 74 in figure 3.)." (Office Action p. 3, lines 7-9.) Clearly Fowler does not disclose a sensor that determines the roll angle of the bird as in the claim under consideration. Fowler discloses a depth sensor but not an inclinometer. Fowler discloses that the yoke and linkages "are shown as being coupled to wings 26 to position the wings at the appropriate angle for leveling purposes." (Fowler at column 4, lines 42-43.) Indeed, the wings in Fowler are moved only for controlling the depth of the bird, and

not for controlling the roll angle of the bird, and thereby not for controlling the lateral position of the steamer. Indeed, Fowler teaches that the wings must remain in a horizontal position, stating "housing 20 is maintained in a vertical position with the wings 26 in a horizontal position." (Fowler at column 4, lines 49-51.) Thus, Fowler does not teach, show or suggest a sensor means for determining the inclination of the wings.

Furthermore, the claim under consideration includes the limitation of "control means.... for independently adjusting the respective angular positions of said two control surfaces so as to control the lateral position of the streamer as well as the depth." As disclosed in the specification by Applicant, "The control circuit 34 then adjusts each of the wings 24 independently by means of the stepper motors 48, 50, so as to start to achieve the calculated bird roll angle and wing angular positions." (Spec. at p. 6, lines 8-10.)

Fowler makes no attempt to independently control each wing. Fowler discloses that "Electronic circuitry is provided to activate a motor 76 which drives a screwdrive 78 having its other end attached to a potentiometer 80 which provides information as to the position of the yoke 82 and therefore the position of the wings 26 which are linked to yoke 82 via linkage 84." (Fowler at column 4, lines 33-38.) Clearly, from this description, Fowler discloses one motor that drives the angular position of both wings together, not independently as in the claim under consideration. Thus, Fowler does not teach, show or suggest independently adjusting the two control surfaces.

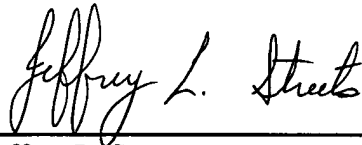
As stated by the Federal Circuit, a proper anticipation rejection requires that a single prior art reference disclose each and every element of the claimed invention, arranged as in the claim. *American Hoist, supra*. Fowler does not disclose the element of a sensor means in the body for determining the roll angle of the bird nor does Fowler disclose the element that the wings of the bird may be independently adjusted. Therefore, Applicant respectfully requests reconsideration of the rejection and allowance of the claim under consideration.

The foregoing amendments to claim 1 are not made for purposes of patentability but merely to conform the claim more closely to typical U.S. patent claim punctuation and form and to provide a more accurate description of the claimed invention.

Applicant has submitted new claims 14-61 and respectfully requests that the Examiner enter and consider all of the claims. Applicant asserts that, based upon the remarks above, all claims are in condition for allowance.

In the event a fee is required in connection with this Response, including late fees, the Commissioner of Patents and Trademarks is hereby authorized to charge Deposit Account No. 50-0714/WEST/0008 for the necessary amount.

Respectfully submitted,



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MARKED UP VERSION OF CLAIM AMENDMENTS

1. (Amended) A control device for controlling the position of a marine seismic streamer, the device comprising:

a body mechanically adapted to be connected in series between two adjacent sections of the streamer;_i[,]

sensor means in the body for determining its angular position in a plane approximately perpendicular to the longitudinal axis of the streamer;_i[,]

two opposed control surfaces projecting outwardly from the body, each control surface being rotatable about an axis which [in use] extends transversely of the streamer;_i[,] and

control means responsive to control signals and the sensor means for independently adjusting the respective angular positions of said two control surfaces so as to control the lateral position of the streamer as well as its depth.